

# Work Order ID 98681

March-19-13 2:50:26 PM

\*98681\*

~~PRELIMINARY ADVISORY~~  
~~PRELIMINARY ISSUE~~

Free Rev B. S 13/09/03

Page 1

Item ID: D4172-7

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Crossbar

Stop

\*NS2\*

Start Date: 3/19/13

Start Qty: 5.00

\*5\*

Cust Item ID:

Required Date: 3/22/13

Req'd Qty: 5.00

\*5\*

Customer:

Reference:

Approvals:

Process Plan:

U

Date:

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr	DAS							
D4172	PBI Rev B	27 9-89							
100		1383							
*100*									
Small Fab	Memo	0.00							
Small Fab	1- Cut to length as per dwg 2- Use DT9661 to drill holes in angle, open to size as per dwg 3- C'sink holes as per dwg 4- Deburr holes								
110	QC5- Inspect part completeness to step on W/O	0.00							
*110*									
QC	Memo	0.00							
Quality Control									
120	Chemical Conversion Coat per QS1005 4.1	0.00							
*120*									
HandFinish	Memo	0.00							
Hand Finishing									

5 φ

FF  
13-05-02

27  
1352

S  
inspected as per  
due PBI

5 13-5-2

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
---	---	---	--	---

# Work Order ID 98681

\*98681\*

Page 2

March-19-13 2:50:26 PM

Item ID: D4172-7

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Crossbar

Start Date: 3/19/13

Start Qty: 5.00

\*5\*

Cust Item ID:

Required Date: 3/22/13

Req'd Qty: 5.00

\*5\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC7-Inspect Chemical Conversion Coat

0.00

\*130\*

QC

Memo

0.00

Quality Control

140

Identify as per dwg & Stock Location: CA

0.00

\*140\*

Packaging

Memo

0.00

Packaging

150

QC21- Final Inspection - Work Order Release

0.00

\*150\*

QC

Memo

0.00

Quality Control

13/9/13

POSITIVE RECALL  
EFFECTIVE 1/27/13  
RELEASED

inspect as per  
Dwg Rev B

AUTH. 1/27/13  
DATE 13/09/13

DAS  
27  
9-89

13.9.3

Per Rev B.

13-09-3

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>
--	---	---

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

# Picklist Print

March-19-13 2:50:26 PM

Page 1

Work Order ID: 98681

Parent Item: D4172-7

Parent Item Name: Crossbar

Start Date: 3/19/13

Required Date: 3/22/13

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:A 10.09.09 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6A1.000W.125 6061T6 ANGLE 1.00 x 1.00 x .125W		Purchased	No			100	f	60.2422	1.3453	7.0805263			

FF 13-05-02

Location	Loc Qty	Loc Code
MAT007 125006	6.8422	
115688	3.16	
122081	3.6822	
MAT012	53.4	
122753	53.4	

7.0805

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

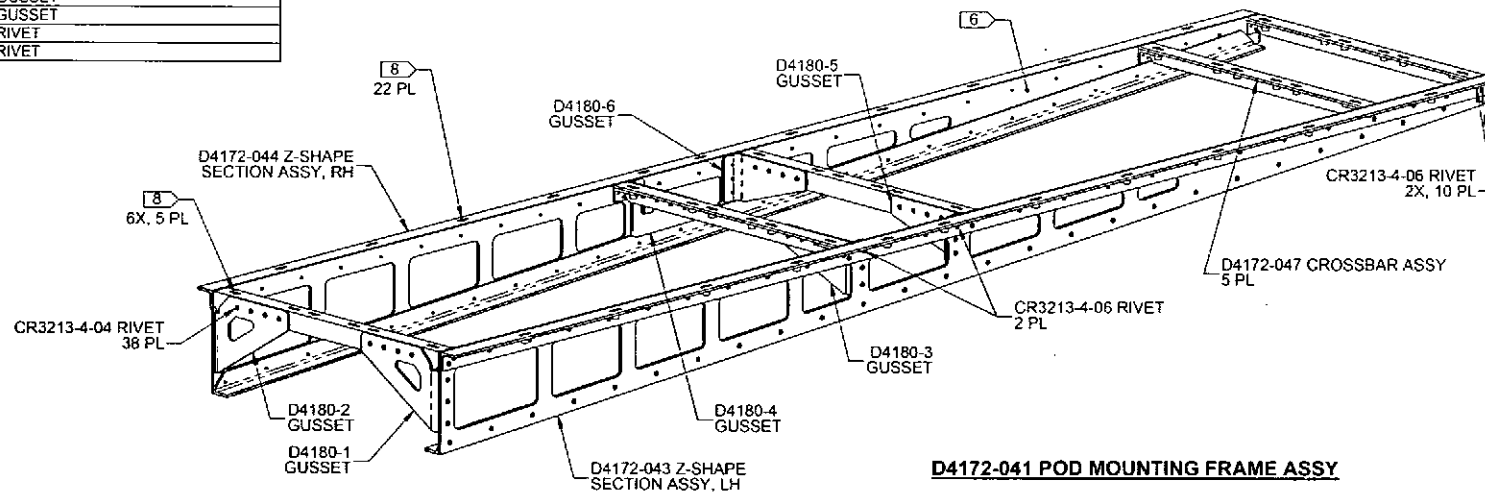
Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Skid-tube <input type="checkbox"/></td> <td style="width: 33%;">Crosstube <input type="checkbox"/></td> <td style="width: 33%;">Water Jet <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> </tr> </table> <div style="text-align: right; margin-top: 10px;">       Engineering <input type="checkbox"/>        Quality <input type="checkbox"/>        Other <input type="checkbox"/> </div>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>												
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>												
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>												
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>												

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

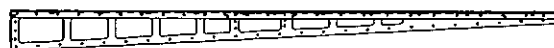
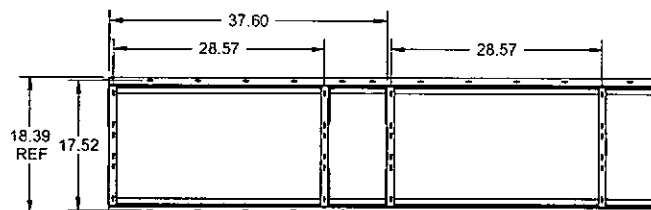
**FAULT CATEGORY**

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabelled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

ITEM	QTY -041	P/N	DESCRIPTION
	X	D4172-041	POD MOUNTING FRAME
1	1	D4172-043	Z-SHAPE SECTION ASSY, LH
2	1	D4172-044	Z-SHAPE SECTION ASSY, RH
3	5	D4172-047	CROSSBAR ASSY
4	1	D4180-1	GUSSET
5	1	D4180-2	GUSSET
6	1	D4180-3	GUSSET
7	1	D4180-4	GUSSET
8	1	D4180-5	GUSSET
9	1	D4180-6	GUSSET
10	24	CR3213-4-06	RIVET
11	65	CR3213-4-04	RIVET



**D4172-041 POD MOUNTING FRAME ASSY**



**SUPPLEMENTAL VIEWS**

**PRELIMINARY ISSUE**

13.02.25

- NOTES:
- 1) MATERIAL: NONE
  - 2) FINISH: POWDER COAT "GREY SANDEXT" (4.3.5.6) PER DART QSI 005 4.3
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.1 (PERMANENT INK MARKER)
  - 7) WEIGHT: 12.5 lbs
  - 8) MASK PRIOR TO POWDER COATING

PB1	REMOVED D4181-1 AND MS24694-S100 SCREWS, SEE NEXT ASSEMBLY	MB	13.02.25
A	NEW ISSUE	MB	10.09.15
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.02.25		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4172** REV. PB1  
SHEET 1 OF 7

TITLE **POD MOUNTING FRAME ASSY** SCALE **NTS**

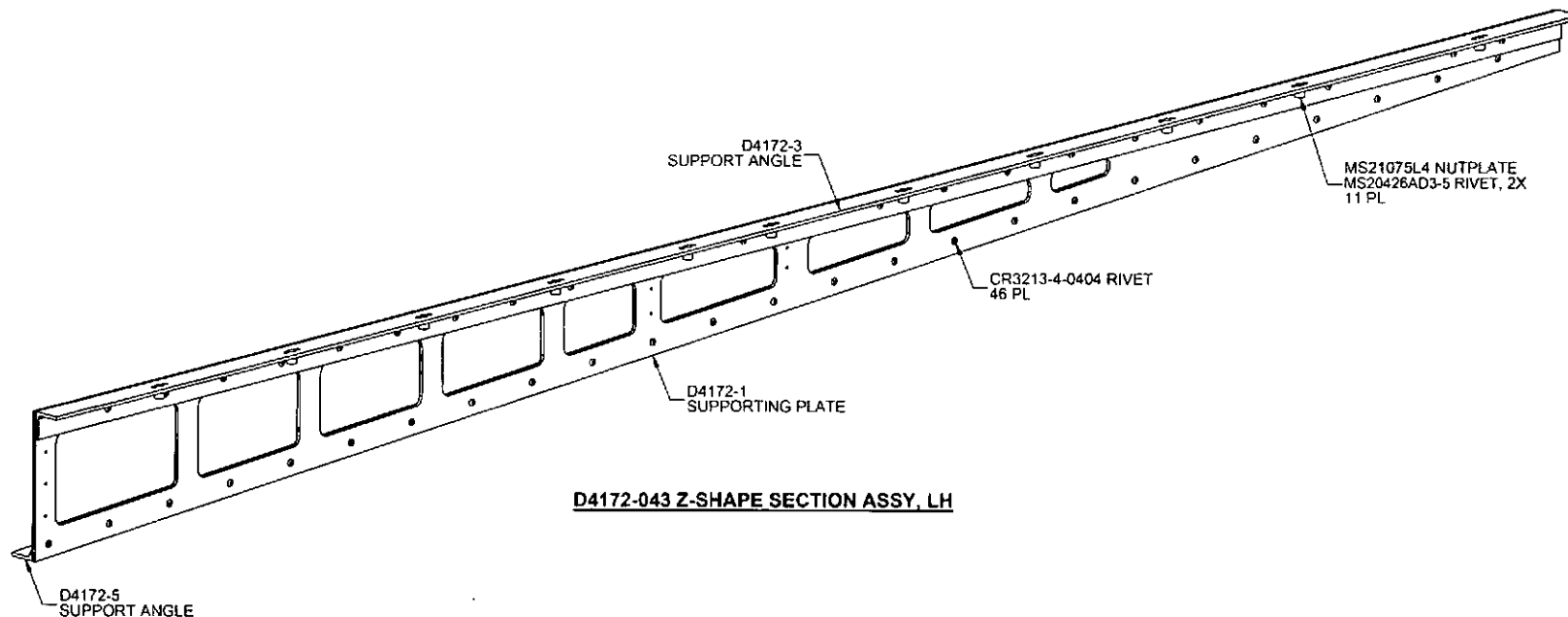
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946021

ITEM	QTY	P/N	DESCRIPTION
	X	D4172-043	Z-SHAPE SECTION ASSY, LH
1	1	D4172-1	SUPPORTING PLATE
2	1	D4172-3	SUPPORT ANGLE
3	1	D4172-5	SUPPORT ANGLE
4	22	MS20426AD3-5	RIVET, CSK
5	11	MS21075L4	NUT PLATE
6	46	CR3213-4-04	RIVET



**D4172-043 Z-SHAPE SECTION ASSY, LH**

- NOTES:**
- 1) MATERIAL: NONE
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 2.13 lbs

**PRELIMINARY ISSUE**

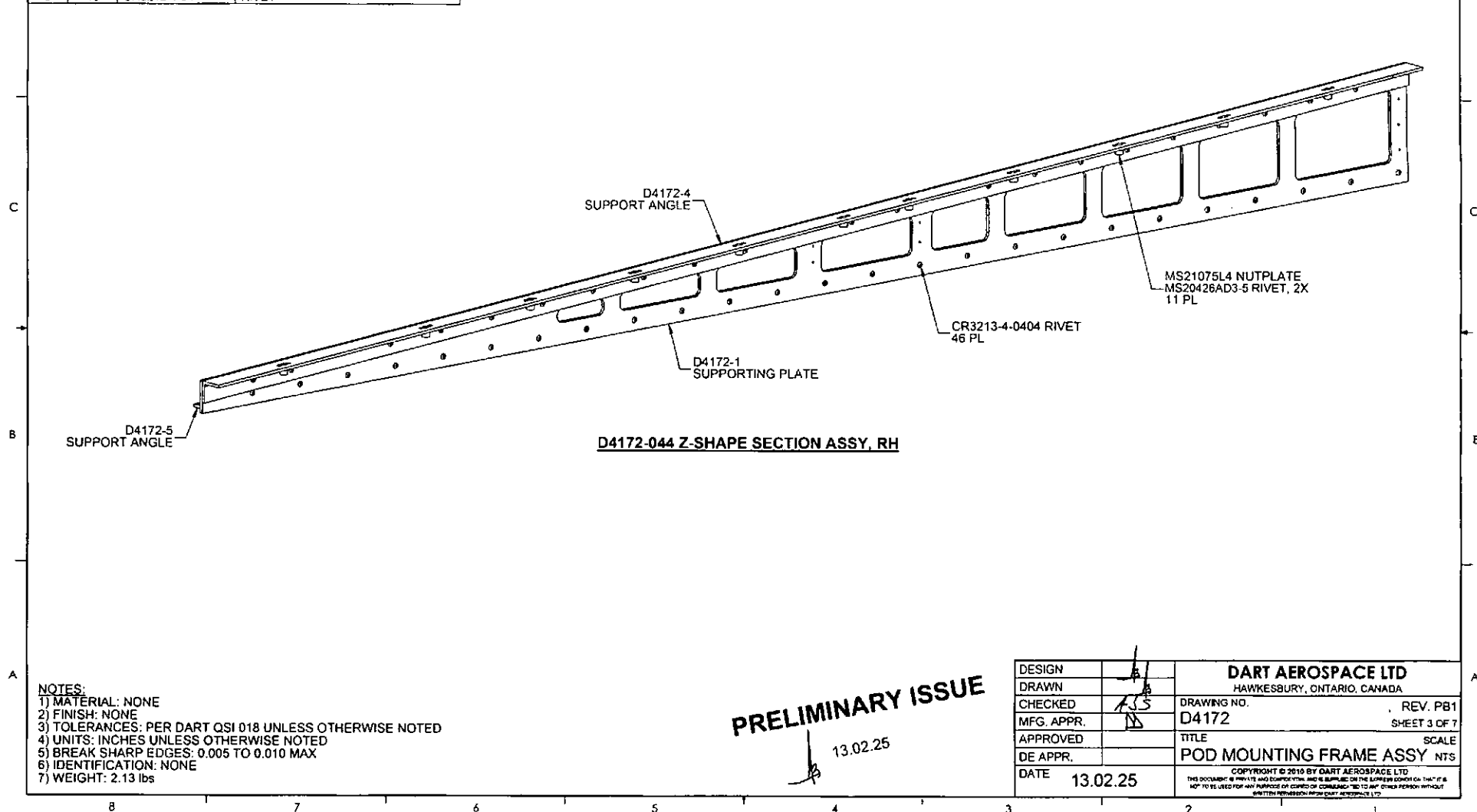
13.02.25

DESIGN		<b>DART AEROSPACE LTD</b>
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. <b>D4172</b>
MFG. APPR.		REV. PB1
APPROVED		SHEET 2 OF 7
DE APPR.		TITLE
DATE	13.02.25	<b>POD MOUNTING FRAME ASSY</b>
		SCALE NTS
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98081

ITEM	QTY	P/N	DESCRIPTION
	X	D4172-044	Z-SHAPE SECTION ASSY, RH
1	1	D4172-1	SUPPORTING PLATE
2	1	D4172-4	SUPPORT ANGLE
3	1	D4172-5	SUPPORT ANGLE
4	22	MS20426AD3-5	RIVET, CSK
5	11	MS21075L4	NUT PLATE
6	46	CR3213-4-04	RIVET



- NOTES:
- 1) MATERIAL: NONE
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 2.13 lbs

**PRELIMINARY ISSUE**

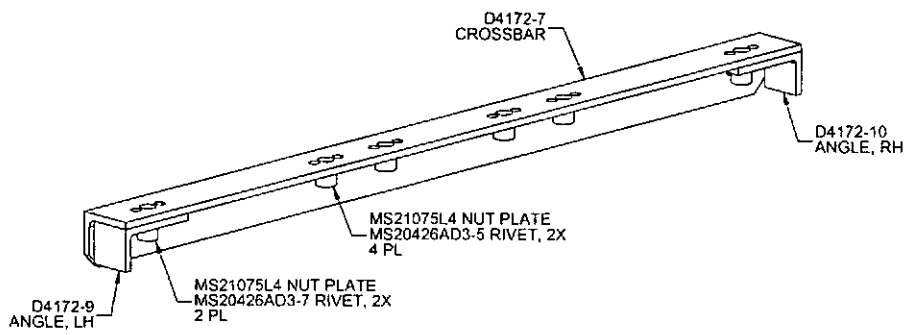
13.02.25

DESIGN		<b>DART AEROSPACE LTD</b>
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED	ASS	DRAWING NO. D4172
MFG. APPR.	DS	REV. PB1
APPROVED		SHEET 3 OF 7
DE APPR.		TITLE
DATE	13.02.25	SCALE
		POD MOUNTING FRAME ASSY NTS
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98681

ITEM	QTY	P/N	DESCRIPTION
	X	D4172-047	CROSSBAR ASSY
1	1	D4172-7	CROSSBAR
2	1	D4172-9	ANGLE
3	1	D4172-10	ANGLE
4	6	MS21075L4	NUT PLATE
5	8	MS20426AD3-5	RIVET, CSK
6	4	MS20426AD3-7	RIVET, CSK



**D4172-047 CROSSBAR ASSY**

NOTES:  
 1) MATERIAL: NONE  
 2) FINISH: NONE  
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
 4) UNITS: INCHES UNLESS OTHERWISE NOTED  
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
 6) IDENTIFICATION: NONE  
 7) WEIGHT: 0.19 lbs

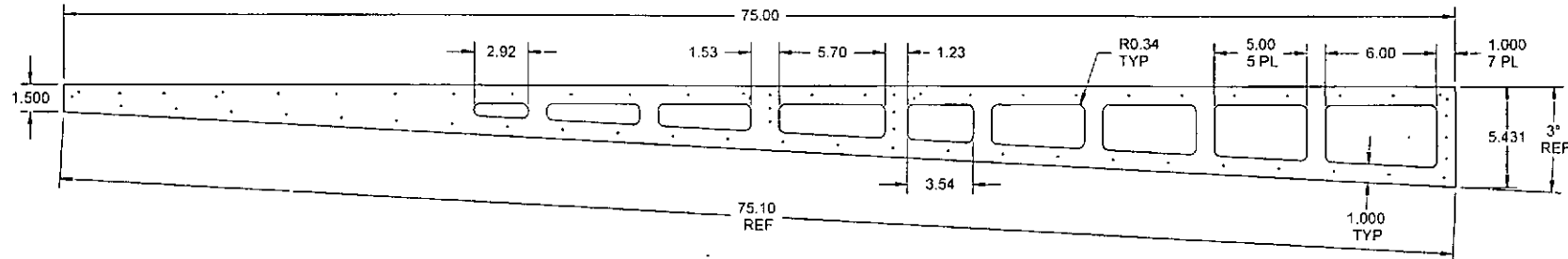
**PRELIMINARY ISSUE**

13.02.25

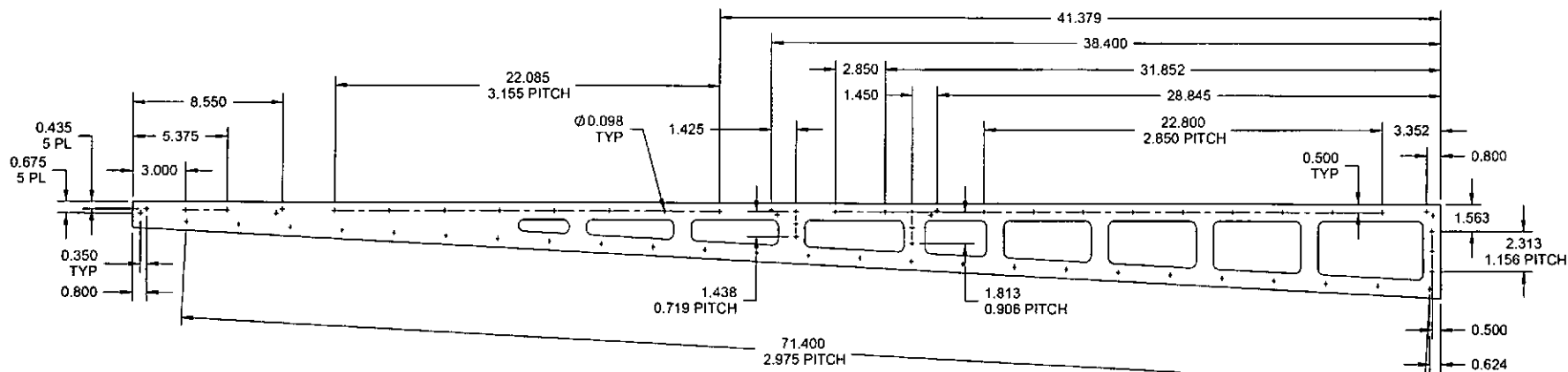
DESIGN		<b>DART AEROSPACE LTD</b>
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED	AS	DRAWING NO. REV. PB1
MFG. APPR.	DS	D4172 SHEET 4 OF 7
APPROVED		TITLE SCALE
DE APPR.		POD MOUNTING FRAME ASSY NTS
DATE	13.02.25	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

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98681



**D4172-1 SUPPORTING PLATE**



**SUPPLEMENTAL VIEW**

**NOTES:**

- 1) MATERIAL: 6061-T61/T62 ALUMINUM SHEET, 0.125 THICK PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 REF: DART SPEC. M6061T6S.125
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.78 lbs

**PRELIMINARY ISSUE**

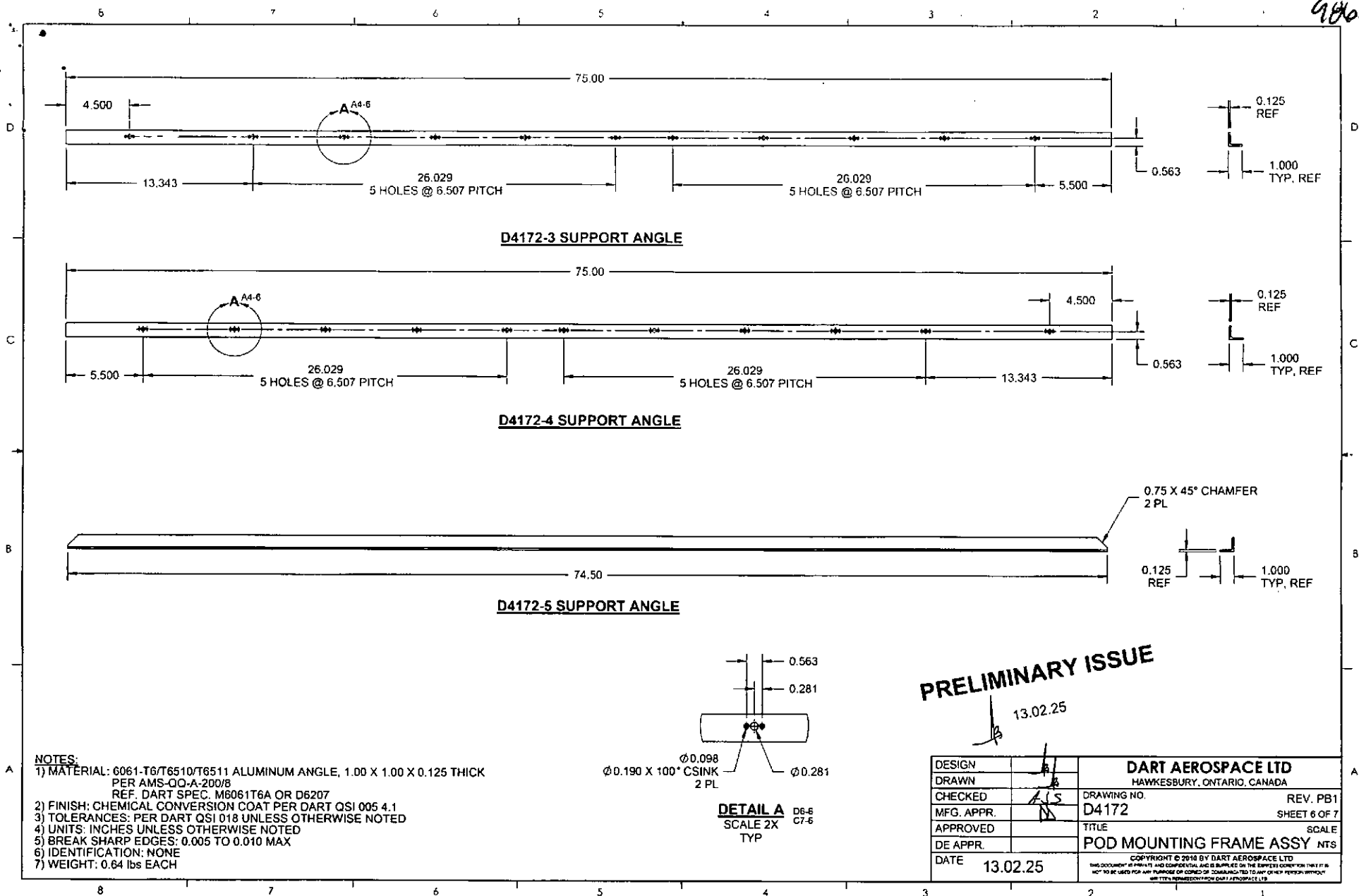
13.02.25

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PB1
MFG. APPR.		D4172	SHEET 5 OF 7
APPROVED		TITLE	SCALE
DE APPR.		POD MOUNTING FRAME ASSY	NTS
DATE	13.02.25	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR LOANED OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



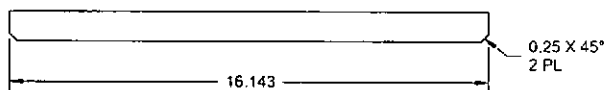
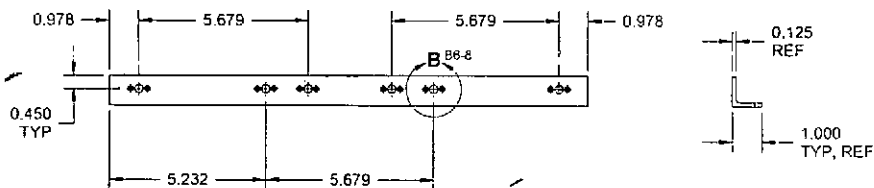


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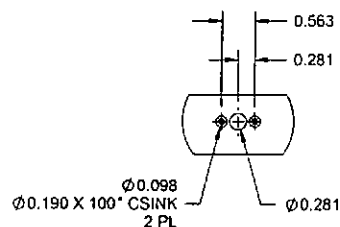




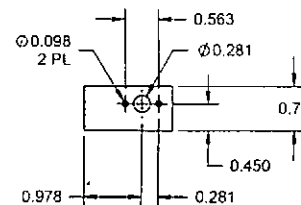
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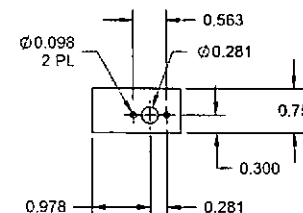
**D4172-7 CROSSBAR**



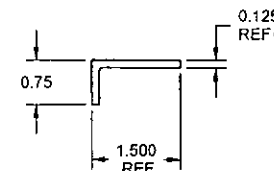
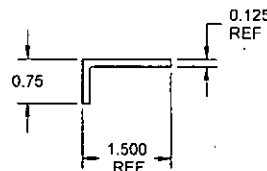
**DETAIL B B6-8**  
SCALE 2X  
TYP



**D4172-9 ANGLE**



**D4172-10 ANGLE**



**NOTES:**

**1) MATERIAL**

D4172-7: 6061-T6/T6510/T6511 ALUMINUM ANGLE, 1.00 X 1.00 X 0.125 THICK

PER AMS-QQ-A-200/8

REF. DART SPEC. M6061T6A OR D6207

D4172-9/-10: 6061-T6/T6510/T6511 ALUMINUM ANGLE, 1.50 X 1.50 X 0.125 THICK

PER AMS-QQ-A-200/8

REF. DART SPEC. M6061T6A OR D6203

**2) FINISH:** CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

**3) TOLERANCES:** PER DART QSI 018 UNLESS OTHERWISE NOTED

**4) UNITS:** INCHES UNLESS OTHERWISE NOTED

**5) BREAK SHARP EDGES:** 0.005 TO 0.010 MAX

**6) IDENTIFICATION:** NONE

**7) WEIGHT:** D4172-7 = 0.14 lbs; D4172-9/-10 = 0.01 lbs EACH

**PRELIMINARY ISSUE**

13.02.25

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PB1
MFG. APPR.		<b>D4172</b>	SHEET 7 OF 7
APPROVED		TITLE	SCALE
DE APPR.		<b>POD MOUNTING FRAME ASSY</b>	NTS
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# Receiving Report

Date: 12/3/21  
 Supplier: CAMP

Batch No: M1261006  
 Dart P/O: 19377

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☐ No ☒  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC6 Inspection ☒ N/A ☐  
 Work Order 1398684 N/A ☐

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12

Production/Admin: 13/3/22  
 Date    
 Received/Costing    
 Initial  

Location





[illegible]

Thursday, March 21, 2013 10:22:08 AM

All Vendors PO ID PO19377 All Receipt Dates All Line Item Types

All Item ID/GL/WOs    All Rec. Employees    All Currencies

Grouped by Vendor ID

VendorID\Vendor Name	VC-CAM002	Camp Steel								
PO19377	1	M6061T6A1.000W.1 f 25		3/21/2013	3/21/2013	80.0000	\$0.65	0.0000	0	\$52.21
CAD	No	6061T6-ANGLE-1.00-f x1.5x1.5x125W 125006/98684		80.0000	DESJ02		\$52.21	0.0000	0	
	2	D6203P f		3/21/2013	3/21/2013	80.0000	\$1.05	0.0000	0	\$83.91
	No	Angle 6061T6 f 1.5x1.5x125 125006/98684		80.0000	DESJ02		\$83.91	0.0000	0	





935, boul. du Havra  
Valleyfield (Québec)  
J6S 5L1

TÉLÉPHONE : 450 377-4248  
FAX : 450 377-5696

MONTREAL : 514 336-4248  
FAX : 514 336-4246

DISTRIBUTEUR D'ACIER ET MÉTAUX SPÉCIALISÉS  
STEEL AND SPECIALTY METALS DISTRIBUTOR

ONTARIO : 1 800 667-4248  
FAX : 1 866 456-4242

On a du Savoir "FER"

VENDU À / SOLD TO:

613-632-5200 613-632-1053

EXPÉDIEZ À / SHIP TO:

COFFIN

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY,  
ONTARIO

DART AEROSPACE LTD  
1270 ABERDEEN STREET  
HAWKESBURY,  
ONTARIO

K6A 1K7

EQUIP: OUI LIFT

K6A 1K7

COMMANDE  
ORDER

N° 212686

DATE 20/03/13

BON DE LIVRAISON  
PACKING SLIP N°

DATE DE LIVRAISON  
DELIVERY DATE 21/03/13

VOTRE N° DE COMMANDE / YOUR EQ. N°	VEND. / SALESM.	CODE CLIENT / CUST. CODE	EXPÉDIE PAR / SHIP VIA	TERMES / TERMS	TERR.	REMARQUES / REMARKS	PAGE N°
P019377	U	DAER	12345	NET 30 JOURS	2R		001

CODE DE PRODUIT PRODUCT CODE	COMMANDE ORDERED	EXPÉDIE SHIPPED	DESCRIPTION	POIDS WEIGHT	PRIX PRICE	PAR PER *	MONTANT AMOUNT
AAL1113	00		**MILL TEST REQUIS				
AAL11211218	00		AL. ANGLE 1 1/2 X 1 1/2 X 1/8 HEAT: 55025	22.40			
			AL. ANGLE 1 1/2 X 1 1/2 X 1/8 4 X 20' HEAT: 55154	36.00			

\* Unités de mesure: CLB Cent livres • CPI Cent pieds • UN Unit • PI Pied Foot • PC Pied carré Square foot

POIDS TOTAL  
TOTAL WEIGHT 58

#### CONDITIONS:

LES MATÉRIAUX LIVRÉS ET FACTURÉS TELS QUE DÉCRITS DEVIENT LA PROPRIÉTÉ DE "ACIER CAMP I INC." AINSI QU'À PARFAIT PAYEMENT COMPLET. LA GARANTIE DE QUALITÉ DU MATÉRIEL EST LA MÊME QUE CELLE DU FABRICANT. L'ACHETEUR S'ENGAGE À RESPECTER LES CONDITIONS SUIVANTES: NET 30 JOURS DE LA DATE DE FACTURATION; ET TOUT COMITÉ IMPRÉVU DANS LES 30 JOURS ENTRAINER DES FRAIS DE 2% PAR MOIS (24% PAR ANNEE) QU'IL ACCEPTE DE PAYER. TOUT DÉFAUT D'EXÉCUTION LÈVE OU L'AUTRE DES OBLIGATIONS EN VERTU DU PRÉSENT CONTRAT ENTRAINER LA DÉCHÉANCE DU TERME ET PERMET À L'ACHETEUR, À SON CHOIX, DE RÉCLAMER TOUT SOLDE DU PRIX DE VENTE OU DE REPRISE LE BIEN VENDU. TOUTE RÉCLAMATION DOIT ÊTRE FAITE DANS LES CINQ JOURS SUivant PRÉSENTATION DE CE DOCUMENT. TOUTE MARCHANDISE EN DOMMAGE, ALTÉRÉE OU CHANGÉE NE PEUT ÊTRE REPRISE. AUCUN RETOUR DE MARCHANDISE NE SERA ACCEPTÉ SANS NOTRE AUTORISATION. TOUTE MARCHANDISE RETOURNÉE EST SUJETTE À DES FRAIS DE MANUTENTION DE 25%.

#### CONDITIONS:

ALL SOLD AND DELIVERED MATERIALS REMAIN THE PROPERTY OF "ACIER CAMP I INC." UNTIL PAYMENT IS MADE IN FULL, COMPLETE AND CASHED. ALL LOST MATERIALS ARE AT THE BUYER'S EXPENSE. ALL MATERIALS BEAR THE SAME WARRANTY AS GIVEN BY THE MANUFACTURER. THE BUYER HEREBY AGREES TO RESPECT THE FOLLOWING CONDITIONS: NET 30 DAYS FROM BILLING DATE AND THE BUYER ACCEPTS TO PAY ADMINISTRATION CHARGES OF 2% PER MONTH OR 24% PER ANNUM ON ALL PAST DUE ACCOUNTS OVER 30 DAYS. ANY DEFAULT IN RESPECT WITH THIS CONTRACT WILL LEAD TO PAYMENT BY ACCELERATION AND PERMITS TO THE SELLER, AT HIS CHOICE TO CLAIM FOR THE BALANCE DUE OR THE REPOSSESSION OF THE GOODS SOLD. ANY CLAIM MUST BE MADE WITHIN FIVE DAYS WITH THIS DOCUMENT ENCLOSED. ANY MERCHANDISE THAT HAS BEEN DAMAGED, CUT OR IMPAIRED CANNOT BE RETURNED. ALL GOODS RETURNED MUST BE WITH OUR AUTHORIZATION AND ARE SUBJECT TO A 25% RESTOCKING CHARGE.

MARCHANDISE REÇUE EN BONNE CONDITION MERCHANDISE RECEIVED IN GOOD CONDITION

PRÉPARÉ / PREPARED  
PAR BY

VÉRIFIÉ / VERIFIED  
PAR BY

N° ENR. TPS / GST REG. N° R 135 634 717 • N° ENR. TVQ / QST REG. N° 1 015 688 643

LIVRÉ / DELIVERED  
PAR BY

SIGNATURE DU CLIENT / CUSTOMER'S SIGNATURE

DATE

SOUS-TOTAL  
SUB TOTAL

T.P.S.  
G.S.T.

T.V.Q. / T.V.H.  
Q.S.T. / H.S.T.

TOTAL



# sapa

## Test de dureté Rockwell Rockwell Hardness Test

Client / Customer :

Adresse / Address :

# commande Sapa / Sapa order # : 2091204

# bon de commande / Purchase order # : CA-38517

# de matrice / Die # : MS 9611

Description : 1.5X1.5X1/8 IN.ANGLE RD.FT

Alliage & trempage / Alloy & temper : 6061 T6

Longueur / Length : 6096 mm

# Contrôle / Control # : 77882-1

# Coulée / Cast # : 55154

Dureté Rockwell E /

Rockwell E hardness : 90 HRE

Min. requis /

Min. required : 88 HRE

Max. permis /

Max. permitted : 100 HRE

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0.20 - 0.60	0.35 Max	0.10 Max	0.10 Max	0.45 - 0.90	0.10 Max	0.10 Max	0.10 Max
6005	0.60 - 0.90	0.35 Max	0.10 Max	0.10 Max	0.40 - 0.40	0.10 Max	0.10 Max	0.10 Max
6005A	0.66 - 0.74	0.14 - 0.28	0.08 - 0.16	0.18 - 0.26	0.46 - 0.54	0.03 Max	0.05 Max	0.05 Max
6061	0.40 - 0.80	0.70 Max	0.15 - 0.40	0.15 Max	0.80 - 1.20	0.04 - 0.35	0.25 Max	0.15 Max
6351	0.7 - 1.3	0.5 Max	0.10 Max	0.40 - 0.80	0.40 - 0.80	—	0.20 Max	0.20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221-08 excepté pour la section 8.2 (nombre de spécimen) .

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221-08 except for section 8.2 (number of specimen) .

Sincèrement vôtre,  
Yours truly,

date : 2012-10-15



Gilles Pelletier  
Technicien de la qualité  
Quality technician



# sapa

## Test de dureté Rockwell Rockwell Hardness Test

Client / Customer :

Adresse / Address :

# commande Sapa / Sapa order # : 2091204

# bon de commande / Purchase order # : CA-38517

# de matrice / Die # : MS 9405

Description : 1"x1"x 1/8"STRUCT.ANGLE

Alliage & trempage / Alloy & temper : 6061 T6

Longueur / Length : 6096 mm

# Contrôle / Control # : 77883-1

# Coulée / Cast # : 55025

Dureté Rockwell E /  
Rockwell E hardness : 92 HRE

Min. requis /  
Min. required : 88 HRE

Max. permis /  
Max. permitted : 100 HRE

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0.20 - 0.60	0.35 Max	0.10 Max	0.10 Max	0.45 - 0.90	0.10 Max	0.10 Max	0.10 Max
6005	0.60 - 0.90	0.35 Max	0.10 Max	0.10 Max	0.40 - 0.60	0.10 Max	0.10 Max	0.10 Max
6005A	0.66 - 0.74	0.14 - 0.28	0.08 - 0.16	0.18 - 0.26	0.46 - 0.54	0.03 Max	0.05 Max	0.05 Max
6061	0.40 - 0.80	0.70 Max	0.15 - 0.40	0.15 Max	0.80 - 1.20	0.04 - 0.35	0.25 Max	0.15 Max
4351	0.7 - 1.3	0.5 Max	0.10 Max	0.40 - 0.80	0.40 - 0.80	—	0.20 Max	0.20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221-08 excepté pour la section 8.2 (nombre de spécimen) .

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221-08 except for section 8.2 (number of specimen) .

Sincèrement vôtre,  
Yours truly,

date : 2012-10-11



Gilles Peltier  
Technicien de la qualité  
Quality technician

10





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO19377

Purchase Order Date 3/19/13

PO Print Date 3/20/13

Page Number 1 of 1

Order From :

CAMPI STEEL  
935 BOUL. DU HAVRE  
VALLEYFIELD, QC J6S 5L1  
CA

VC-CAM002

Contact Name

Vendor Phone 800 667 4248

Vendor Fax 450 377 5696

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAKED**  
C7303/13

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M6061T6A1.000W.125	6061T6 ANGLE 1.00 x 1.00 x .125W	3/21/13 Yes	80.00 f	Yours ppd	\$0.6662	\$53.30
Special Inst: MATERIAL: 6061-T6/T6510/T6511 ALUMINUM ANGLE AS PER AMS-QQ-A-200/8							
2	D6203P	Angle 6061T6 1.5x1.5 .125	3/21/13 Yes	80.00 f	Yours ppd	\$1.0708	\$85.66
Special Inst: ASPER DWG D6203 REV. A B98684 MATERIAL: 6061-T6/T6510/T6511 ALUMINUM ANGLE AS PER AMS-QQ-A-200/8							

PO Total:

\$138.96

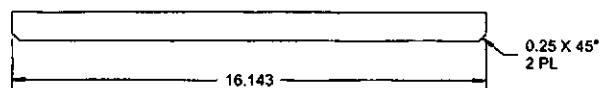
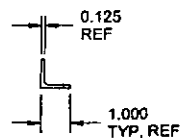
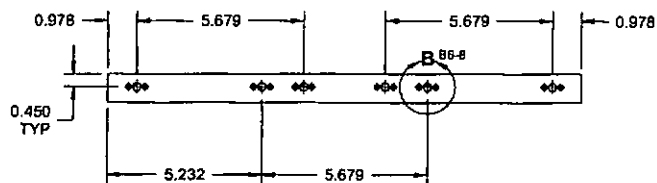
**MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY**

Change Nbr: 3

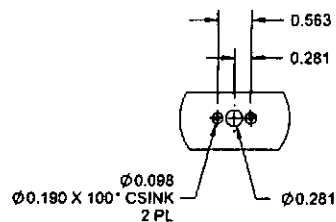
Change Date: 3/20/13

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required **YES** NO

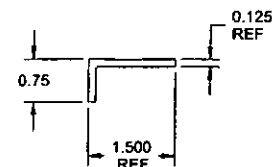
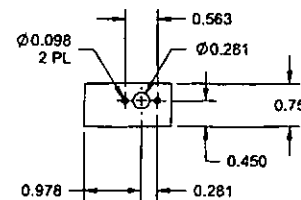
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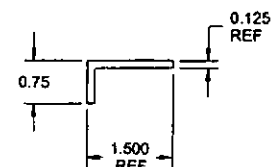
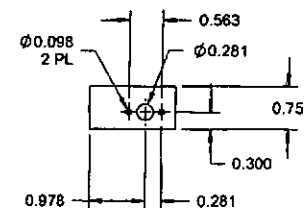
**D4172-7 CROSSBAR**



**DETAIL B**  
D8-8  
SCALE 2X  
TYP



**D4172-9 ANGLE**








**D4172-10 ANGLE**

**NOTES:**

- 1) MATERIAL  
D4172-7: 6061-T6/T6510/T6511 ALUMINUM ANGLE, 1.00 X 1.00 X 0.125 THICK  
PER AMS-QQ-A-200/8  
REF. DART SPEC. M8061T6A OR D6207  
D4172-9/-10: 6061-T6/T6510/T6511 ALUMINUM ANGLE, 1.50 X 1.50 X 0.125 THICK  
PER AMS-QQ-A-200/8  
REF. DART SPEC. M8061T6A OR D6203
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D4172-7 = 0.14 lbs; D4172-9/-10 = 0.01 lbs EACH

RELEASED  
2013-04-02

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. 8
MFG. APPR.		D4172	SHEET 7 OF 7
APPROVED		TITLE	SCALE
DE APPR.		POD MOUNTING FRAME ASSY	NTS
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